

FIGURE 3

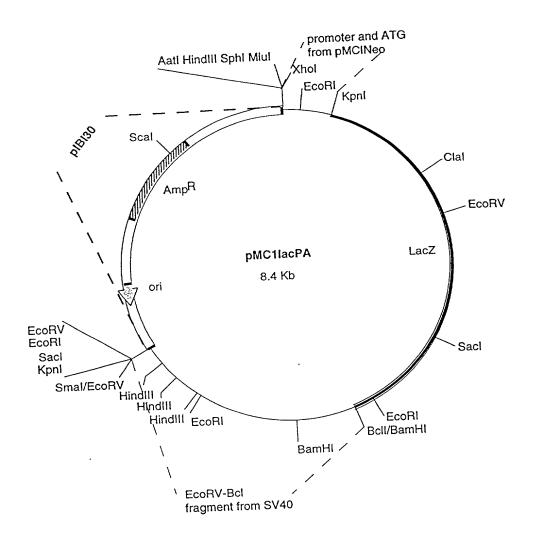


FIGURE 4

Figure 5

3610 3620 3630 3640 3650 3660 ATAAAAAACAACTGCTGACGCCGCTGCGCGATCAGTTCACCCGTGCACCGCTGGATAACG

3670 3680 3690 3700 3710 3720
ACATTGGCGTAAGTGAAGCGACCCGCATTGACCCCTAACGCCTGGGTCGAACGCTGGAAGG
PCR \( \alpha \)

3730 3740 3750 3760 3770 3780 CGGCGGGCCATTACCAGGCCGAAGCAGCGTTGTTGCAGTGCACGGCAGATACACTTGCTG

CTCTAGACGCG, Xba Linker with

3850 3860 3870 3880 3890 3900 GCCGGAAAACCTACCGGATTGATGGTAGTGGTCAAATGGCGATTACCGTTGATGTTGAAG

PCR β

3910 3920 3930 3940 3950 3960

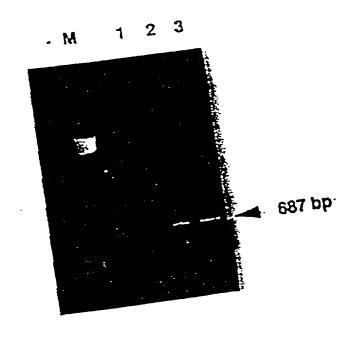
TGGCGAGCGATACACCGCATCCGGCGCGCGCTGGCCTGAACTGCCAGCTGGCGCAGGTAG

3970 3980 3990 4000 4010 4020 CAGAGCGGGTAAACTGGCTCGGATTAGGGCCGCAAGAAAACTATCCCGACCGCCTTACTG

## TEST FOR ALTERATION OF AN INSERTION MUTATION IN THE lacZ ( $\beta$ -GALACTOSIDASE) GENE OF EUKARYOTIC EXPRESSION VECTOR

Experimental Sample	276-mer D	d Plasmid, NA and RecA rotein	Number of Injected Surviving Cells	Number of Surviving Cells Scoring Blue	Surviving Cells Scoring Blue (%)
1	pSV-β-gal	-276-mer - RecA	168	21	12.5
2	pMC1lacpa	- 276-mer - RecA	98	9	9.2
3	pMC1lacXpa	- 276-mer - RecA	173	0	. 0
4	pMC1lacXpa	+ 276-mer - RecA	103	0	0
5	pMC1lacXpa	+ 276-mer + RecA	168	6	3.6

Figure 6

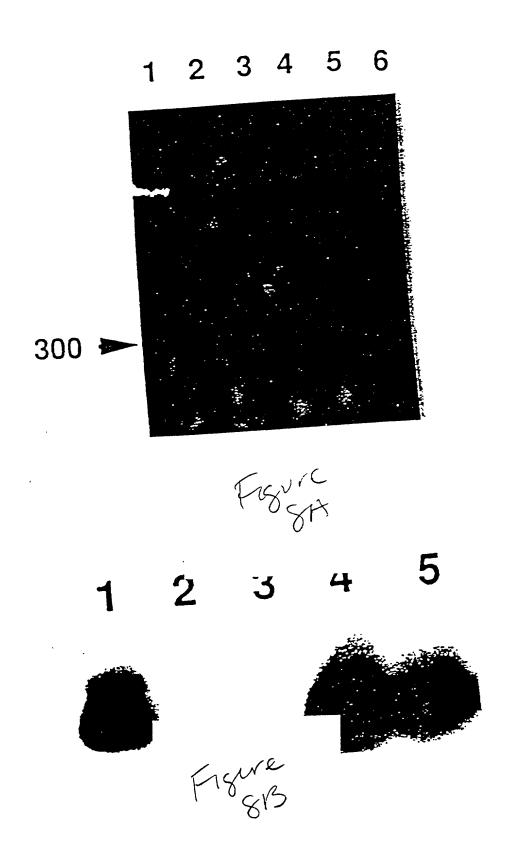


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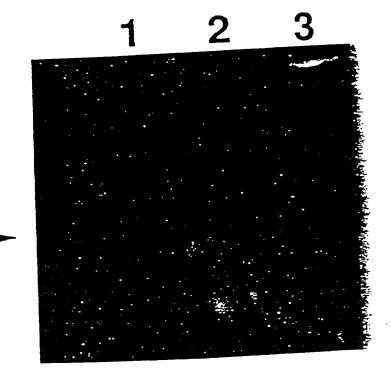
Figure 7B



687 bp



299



Kigg

Scheme for recombination assay

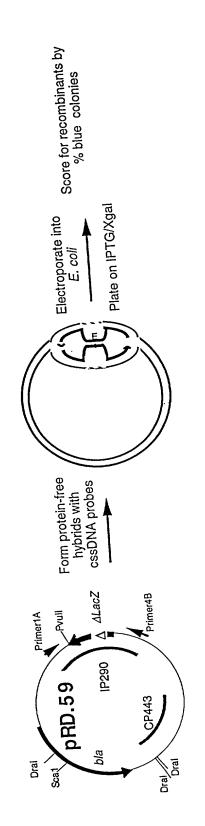


Figure 10

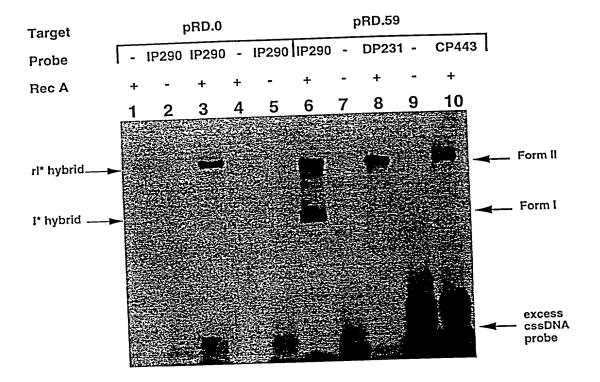


FIGURE 11

## cssDNA Probe:Target Hybrids Enhance Homologous Recombination

Target Probe	RecA coating	Host	%Recombinant / total colonies
pRD.59 -	+	RecA+ RecA -	0 0
pRD.59 IP290 IP290 pRD.59 IP290 IP290	- - +	RecA+ RecA - RecA+ RecA -	0 0 3 0
pRD.59 DP290 DP290 pRD.59 DP290 DP290	- - + +	RecA+ RecA - RecA+ RecA -	0 0 0 0
pRD.59 CP443 CP443 pRD.59 CP443 CP443	+	RecA+ RecA - RecA+ RecA -	1 ^

Figure 12

Stable

Four-strand hybrids

All DNA probe and target strands are paired

Unstable

Certain regions of DNA probe or target strands are unpaired

Three-strand hybrids

A. Target DNA completely homologous

No Internal Homology Clamp

r unpaired unpaired 🖍

B. Target DNA with a deletion

Internal Homology Clamp / formed by cssDNA probe

unpaired +

C. Target DNA with an insertion

Internal Homology Clamp, formed by dsDNA target

Figure 13

Figure 14A

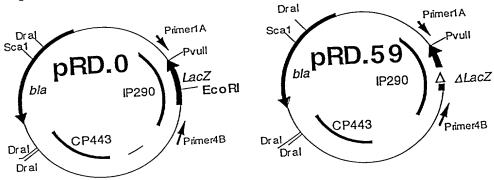
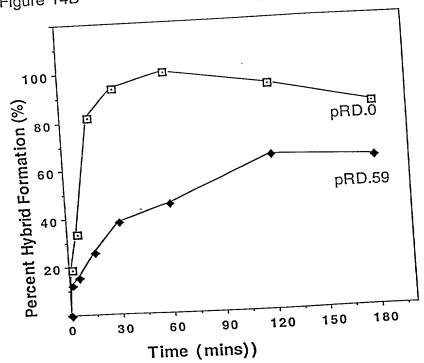


Figure 14B



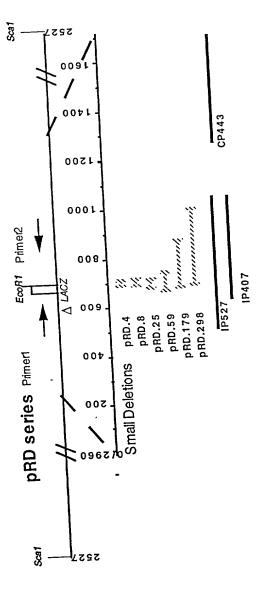
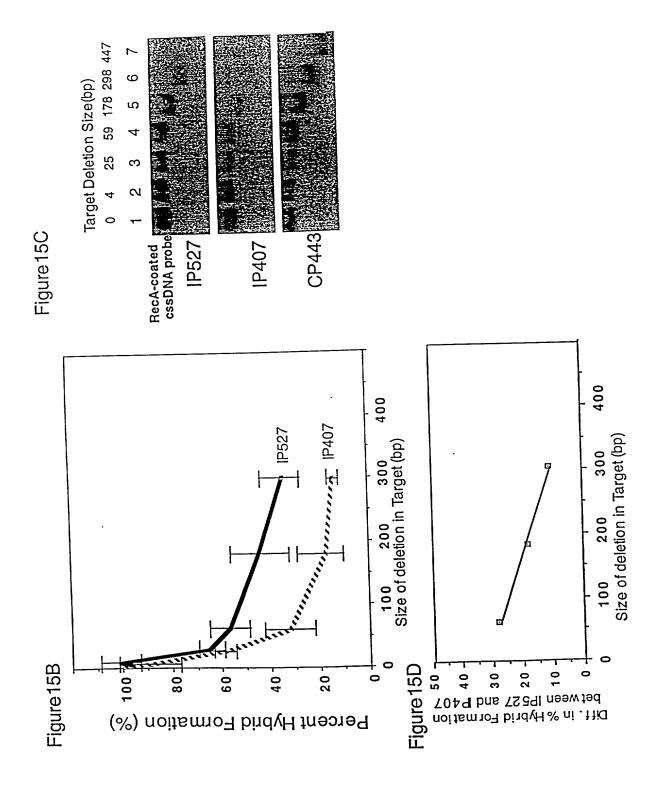


Figure 15A



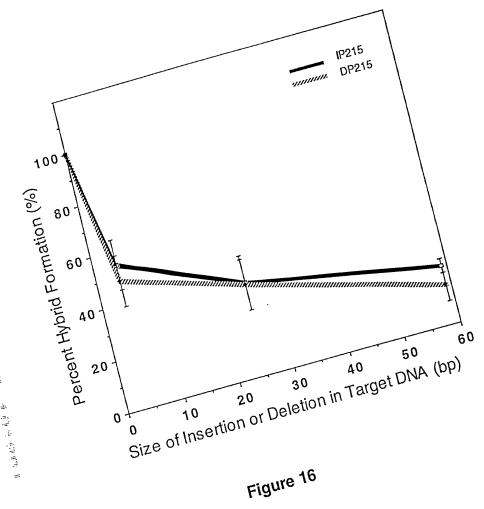


Figure 17A

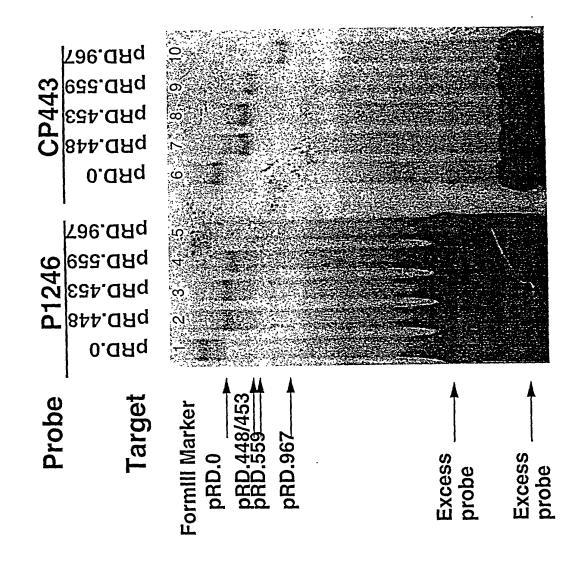
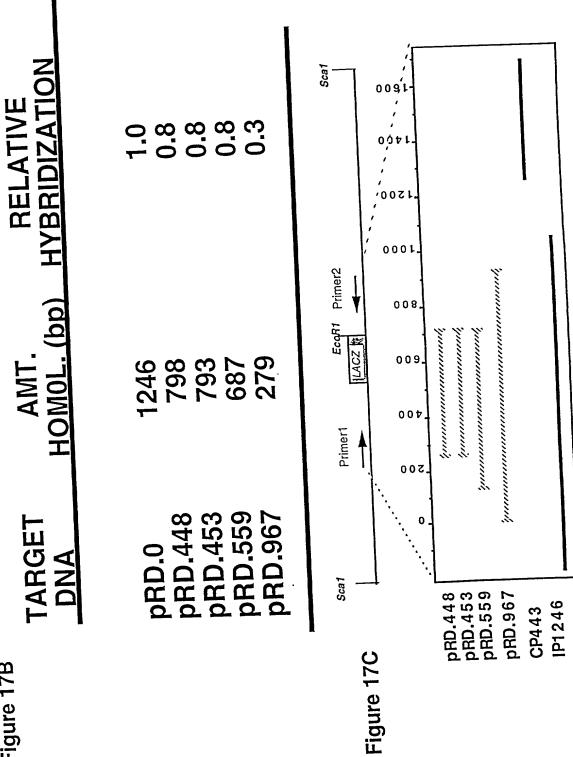
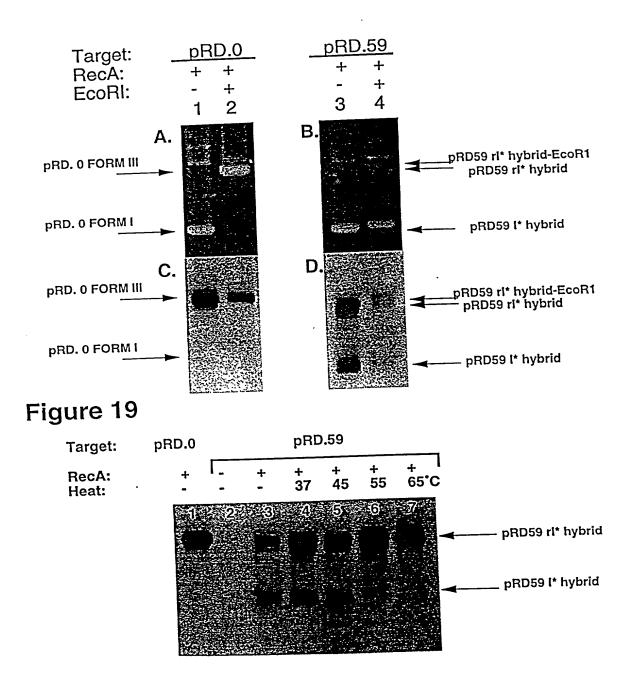


Figure 17B



## Figure 18



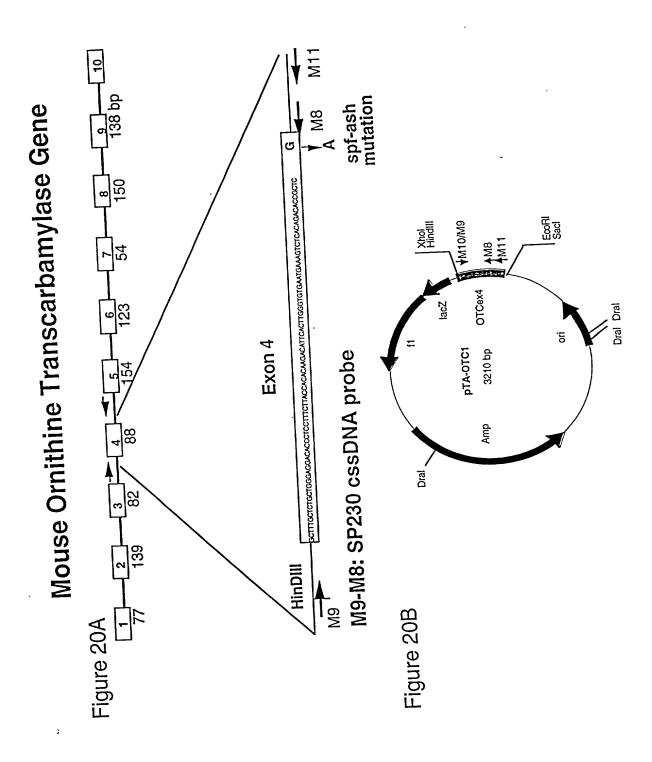


Figure 21

OTC exon4 DNA sequence determination

